

# Women and Ischemia Syndrome Evaluation (WISE) Diagnosis and Pathophysiology of Ischemic Heart Disease Workshop

October 2-4, 2002

## Session 6

### 1. Topic and Author

#### What do Healthcare Providers Need to Know about Presentation of Acute Cardiac Ischemia in Women

Author: Harry P. Selker, MD

### 2. Where we stand in 2002. Overview/rationale for inclusion of topic.

There is a substantial scientific literature about the presentation of acute cardiac ischemia (ACI: including acute myocardial infarction [AMI] and unstable angina pectoris) in women, and yet the diagnosis and treatment of ACI in women in the emergency department (ED) have areas that lag behind that of men. Despite a substantial scientific literature, multiple evidence-based reviews, and efforts by the NIH NHAAP, about the proper use of diagnostic technologies for ACI, their proper use is not uniform. There are diagnostic aids for ACI, including one (the Thrombolytic Predictive Instrument) that has been shown to improve reperfusion treatment of women with AMI, but these are not yet uniformly available or used.

### 3. Current challenges and the most important issues for future research

Besides the continuing need to better understand the presentation of ACI in women (see Session 3), there remains a challenge to understand how to better communicate the key messages about these presentations, about the proper use of diagnostic technologies, and in particular, about those technologies that have been shown to improve diagnosis and treatment in women. A major challenge is to develop and test ways of improving clinicians' diagnosis and treatment of women with ACI/AMI. This should include not only ED physicians, the most common target of such interventions, but also prehospital, non-hospital, and non-physician clinicians, all of whom are part of the recognition and treatment of ACI/AMI.

### 4. Current challenges in the areas of communicating messages to health care community, patients and the public

Healthcare providers have to better understand the presentation of ACI, the optimal use of diagnostic technologies for ACI, and the use of decision aids for diagnosis and treatment of women with ACI.

### 5. Translating new findings to improved diagnosis and treatment/saving lives.

Merely continuing to present data addressing the presentation of ACI in women will not be sufficient to have impact and save lives. There has to be specific demonstration of successful improvement of healthcare providers' diagnosis and treatment of women (and men) with ACI/AMI.

### 6. References.

1. Pope JH, Aufderheide TP, Ruthazer R, Woolard RH, Feldman JA, Beshansky JR, Griffith JL, Selker HP. A multicenter prospective study of missed diagnoses of acute myocardial infarction and unstable angina pectoris in the emergency department. *N Engl J Med*, 342:1163-70, 2000.
2. Maynard C, Beshansky JR, Griffith JL, Selker HP. The influence of sex on the use of cardiac procedures in patients presenting to the emergency department: A prospective multicenter study. *Circulation*, 94:93-98,

1996.

3. Selker HP, Zalenski RJ. An evaluation of technologies for detecting acute cardiac ischemia in the emergency department: A report of the NIH National Heart Attack Alert program. *Ann Emerg Med*, 29:1-87, 1997.
4. Lau J, Ioannidis JPA, Balk EM, et al. Diagnosing acute cardiac ischemia in the emergency department: a systematic review of the accuracy and clinical effect of current technologies. *Ann Emerg Med*. 2001;37:453-460.
5. Ioannidis JPA, Salem D, Chew PW, et al. Accuracy and clinical impact of out-of-hospital electrocardiography in the diagnosis of acute cardiac ischemia: a meta-analysis. *Ann Emerg Med*. 2001;37:461-470.
6. Ioannidis JPA, Salem D, Chew PW, et al. Accuracy of imaging technologies in the diagnosis of acute cardiac ischemia in the emergency department: a meta-analysis. *Ann Emerg Med*. 2001;37:471-477.
7. Balk EM, Ioannidis JPA, Salem D, et al. Accuracy of biomarkers to diagnose acute cardiac ischemia in the emergency department; a meta-analysis. *Ann Emerg Med*. 2001;37:478-494.
8. Ornato JP, Selker HP, Zalenski RJ. Overview: Diagnosing acute cardiac ischemia in the emergency department. A report from the National Heart Attack Alert Program. *Ann Emerg Med*, 37:450-452, 2001.
9. Selker HP; Beshansky JR; Griffith JL; For the TPI Trial Investigators. Use of the electrocardiograph-based thrombolytic predictive instrument to assist thrombolytic and reperfusion therapy for acute myocardial infarction: multicenter randomized clinical effectiveness trial. *Ann Intern Med*, 2002, 137:87-95.
10. Selker HP, Beshansky JR, Griffith JL, Aufderheide TP, Ballin DS, Bernard SA, Crespo SG, Feldman J, Fish SS, Gibler WB, Kieze DA, McNutt RA, Moulton AW, Ornato JP, Podrid PJ, Salem DN, Sayre MR, Woolard RH. The use of the Acute Cardiac Ischemia Time-Insensitive Predictive Instrument (ACI-TIPI) to assist emergency department triage of patients with chest pain or other symptoms suggestive of acute cardiac ischemia: a multicenter controlled clinical trial. *Ann Intern Med*, 129:845-855, 1998.